

**Local Work Instruction:****Transocean Polar Pioneer: Boiler Blowdown Discharge – D007****Approved By:****Scope:****Issue Date:****Revision level:****Written By:****Revised By:****Revision Date:****Next Review Date:**

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**SCOPE:**

This document offers work level instructions for the sampling, testing, and reporting associated with boiler blowdown effluent waste discharge while operating under the guidelines of the NPDES General Permit (AKG-28-8100), on-board the Transocean *Polar Pioneer*. There are two, diesel fired, silo boilers installed on the Polar Pioneer. Chemical additives are routinely added to this system to properly maintain boilers in accordance to the manufacturer's guidelines. The M-I SWACO NPDES Compliance Specialist is responsible to sample, test and record all data onto the NPDES Master Spreadsheet. All records will be submitted to Shell, for monthly submission to EPA via the netDMR.

**RESPONSIBILITY:**

The M-I SWACO NPDES Compliance Specialist is responsible for ensuring that this LWI has been provided to each person involved with this task. Any personnel that may perform the tasks outlined in this document must be familiar with the process, before the rig begins operating under NPDES regulations. During active drilling operations, the M-I SWACO NPDES Compliance Specialist is responsible for performing the following tasks:

- Document the estimated volume discharged.
- Document the quantity of any chemical additive used.
- Perform and document visual sheen tests.
- If visual sheen tests cannot be performed, collect and document samples for static sheen tests.
- Collect and document samples for pH analysis.

**1.0 References**

1.0 NPDES General Permit AKG-28-8100:

1.0.1 Table 8 – *Effluent Limitations and Monitoring Requirements for Boiler Blowdown (D007)*

1.1 Transocean Polar Pioneer Best Management Practices Plan, April 2015.

1.2 Transocean Polar Pioneer Quality Assurance Project Plan, April 2015.

1.3 Boiler manufacturer's recommended preventative maintenance procedures.

1.4 POL RSP 001 GEN Energy Isolations - HSE (2) Lock out / Tag out policies and procedures.

1.5 M-I SWACO (or Mics.) Standard Operating Procedures:

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2004, 2012, 3004, 3005, ENV001.01, TOX045.02, TOX002.05, TOX012.06, TOX014B.02, TOX043.06.

1.6 M-I SWACO Chemical Inventory and Additives Use Management.

1.7 Shell Exploration & Production Company Alaska Venture 2015 Polar Pioneer Waste Management Plan.

## **2.0 General Requirements:**

1.0 The M-I SWACO NPDES Compliance Specialist is responsible for sampling, testing, and reporting to the Shell Environmental Department all effluent discharge permit conditions while operating under the requirements of the NPDES GP AKG-28-8100. Test results, along with the estimated volumes, will be reported to the Shell Environmental Department.

2.0 Shell Environmental Department Shell is responsible for maintaining and submitting the Discharge Monitoring Report (netDMR), all discharges sampling, testing and results on a monthly basis.

2.1 Transocean is responsible for annual testing, operating, and repairing of all equipment associated with this discharge.

## **3.0 Safety Guidelines**

3.0 Before any operations can take place, all personal involved in this process must complete the following details if required by operator or contractor:

3.0.1 The Pre-Tour Meeting is when daily activities are discussed.

3.0.2 Written Risk Assessment with all involved parties present.

3.0.3 After action review of Risk Assessment.

3.0.4 Transocean Permit to Work.

## **4.0 Discharge/Task Description:**

4.0 The two boilers are located in the Port #4 Column and the other the Starboard #4 Column. The point of discharge for this effluent is located adjacent to the inboard side of the Port #4 and Starboard #4 columns respectively, where they are discharged.

4.1 Transocean will maintain a record of chemicals used in boiler water treatment. The tracking of all chemicals in this effluent stream will follow applicable Transocean and boiler manufacturer's preventive maintenance procedures.

4.2 Transocean personnel are responsible for manually discharging boiler blowdown as needed.

4.3 Estimates of boiler blowdown discharge volume are recorded by gauge glass measurement during each event. Transocean is responsible for tracking recorded volumes. The M-I SWACO NPDES Compliance Specialist will maintain a volume record based on the boiler blowdown volumes recorded by Transocean. Prior to Transocean blowing down boilers, the M-I SWACO NPDES Compliance Specialist will be notified so that all required samples, tests, and volumes can be collected then reported on the NPDES Master Spreadsheet.

4.4 Estimates of boiler blowdown discharge volume are recorded by gauge glass

measurement during each event. Transocean is responsible for tracking recorded volumes. The M-I SWACO NPDES Compliance Specialist will maintain a volume record based on the boiler blowdown volumes recorded by Transocean. Prior to Transocean blowing down boilers, the M-I SWACO NPDES Compliance Specialist will be notified so that all required samples, tests, and volumes can be collected then reported on the NPDES Master Spreadsheet.

- 4.5 Estimates of boiler blowdown discharge volume are recorded by gauge glass measurement during each event. Transocean is responsible for tracking recorded volumes. The M-I SWACO NPDES Compliance Specialist will maintain a volume record based on the boiler blowdown volumes recorded by Transocean. Prior to Transocean blowing down boilers, the M-I SWACO NPDES Compliance Specialist will be notified so that all required samples, tests, and volumes can be collected then reported on the NPDES Master Spreadsheet.
- 4.6 A free oil test using the visual sheen method must be performed daily while operating under the NPDES GP. A static sheen test must be performed during low visibility conditions, the results for all tests reported on the NPDES Master Spreadsheet. If a static sheen test is required, depending on which boiler needs to be blown-down, a sample will be collected prior to blow down from the specific boiler.
- 4.7 Samples required for analytical testing (Initial toxicity, pH, and WET) will be collected as required by the NPDES GP and described in Section 5.0 below. These results will be submitted to the Shell Environmental Department for recording on the netDMR and submission to EPA.
- 4.8 The M-I SWACO NPDES Compliance Specialist will immediately report to Shell Environmental Department, at 907-830-7435, of any upset condition.

## 5.0 Sampling Plan for Boiler Blowdown (D007):

| Effluent<br>Parameter | Effluent Limitations             |  | Monitoring Requirements  |
|-----------------------|----------------------------------|--|--|
|                       | Average<br>Monthly Limit         | Maximum Daily<br>Limit                                   | Sample Frequency   |
| pH                    | Report (s.u.)                    | Monthly  | Grab   |
| Free oil              | No discharge <sup>note 1,2</sup> | Once/discharge   | Visual /Grab   |
| Total Volume          | Report (gal)                     | Monthly  | Estimate   |
| WET                   | Report (TU <sub>c</sub> )        | Use rapid toxicity test<br>4X/well as initial<br>screen. | Collect grab sample for analysis<br>if results show potential toxicity<br>or 1X/well if discharge >10,000<br>gal during 24 hr and if chemicals<br>are added to the system. |

## 6.0 Clean-up:

- 6.0 Follow housekeeping practices.

## 7.0 Contingency:

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- 7.0 Notify the Transocean Maintenance Department if any equipment is not working properly.

**Revision Log:**

| <b><u>Date:</u></b> | <b><u>Document History:</u></b> | <b><u>Revised/reviewed by:</u></b> | <b><u>Location:</u></b> |
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